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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,849	07/29/2005	Masayuki Yoshii	264311US2PCT	8633

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EXAMINER	
HINES, ANNE M	
ART UNIT	PAPER NUMBER
2879	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	05/01/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 05/01/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/519,849	YOSHII ET AL.	
	Examiner	Art Unit	
	Anne M. Hines	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on *13 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed on February 12, 2007, has been entered and acknowledged by the Examiner.

Claims 1, and 3-5 are pending in the instant application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kojima et al. (US 2002/0047574) (of record).

Regarding claim 1, Kojima discloses an image display unit comprising a cathode substrate with an electron source for emitting electrons (Fig. 12, 40; Page 11, Paragraph [0247]) and an anode substrate disposed to oppose the cathode substrate (Fig. 11, 20; Page 11, Paragraph [0250]), a grounding section formed on the peripheral edge of the transparent substrate (Fig. 11, 80; Page 12, Paragraphs [0257]-[0259]), a phosphor layer which is formed on the inner surface of the transparent substrate and excited by electrons emitted from the electron source to emit light (Fig. 11, 22; Page 11, Paragraph [0250]), a metal back layer to which a high voltage is applied to accelerate the electrons (Fig. 11, 23; Page 11, Paragraph [0250]), and a high-resistance section

which is disposed between the metal back layer and the grounding section to surround the outer peripheral edge of the metal back layer (Fig. 11, 82; Page 12, Paragraphs [0271]-[0272]); and wherein the high resistance section comprises plural regions with a surface roughness of 1.0 to 15 μm (Fig. 10, 80; Fig. 11, 82; Page 12, Paragraph [0257]; Page 12, Paragraph [0260]; Structure 82 is between the ground 80 and the image region 12 at the plural regions on each side of the image region 12), and these regions are disposed to increase their surface roughness sequentially from the side close to the outer peripheral edge of the metal back layer toward the side away from it (The height, i.e. surface roughness, of 82 increases from the side close to the metal back layer toward the side away from it for half of the distance). Note that the Examiner considers it inherent that the substrate 20 is transparent since substrate 20 is the viewing surface of the display device.

Regarding claim 3, Kojima further discloses wherein the high resistance section has a high resistance coating layer with a surface resistivity of 1×10^9 to 1×10^{15} Ω/square (Page 12, Paragraph [0272]). Note, the high-resistance coating of polybenzimidazole (PBI) inherently has a surface resistance within the claimed range (See previously provided material properties of PBI).

Regarding claim 4, Kojima further discloses wherein the high-resistance section has a rough surface section with a surface roughness of 1.0 to 15 μm (Page 12, Paragraph [020271]), and the high-resistance coating layer is formed on the rough surface section (Page 12, Paragraph [0272]).

Regarding claim 5, Kojima further discloses wherein the high-resistance section comprises plural regions with a surface resistivity of 1×10^9 to 1×10^{15} Ω/square (Page 12, Paragraph [0272]; Fig. 10, 80; Fig. 11, 82; Page 12, Paragraph [0257]; Page 12, Paragraph [0260]; Structure 82 is between the ground 80 and the image region 12 at the plural regions on each side of the image region 12), and these regions are disposed to increase their surface resistivity sequentially from the side close to the outer peripheral edge of the metal back layer toward the side away from it (The height (ie surface roughness) which corresponds to the surface resistivity of 82 increases from the side close to the metal back layer toward the side away from it for half of the distance).

Response to Arguments

Applicant's arguments filed February 12, 2007 have been fully considered but they are not persuasive.

With regard to the Kojima reference and claim 1, Applicant argues that Kojima does not disclose the claimed feature wherein 'the high-resistance section comprises plural regions with a surface roughness of 1.0-15.0 μm, and the plural regions are disposed to increase their surface roughness sequentially from the side closer to the outer peripheral edge of the metal back layer towards the side away from the outer peripheral edge of the metal back layer.' Applicant further argues that Kojima does not disclose plural regions that increase their surface roughness sequentially from the peripheral outer edge side toward the metal back layer side, but rather discloses a single region with a convex shape. Finally, Applicant argues that "citing the height of

that region 82 to correspond to the resistance then it clearly cannot meet the claim limitations as the region 82 in Kojima is symmetrical so that in either direction the surface roughness would increase at the maximum height and then decrease."

The Examiner respectfully disagrees. Kojima discloses a high-resistance section 82 (of polybenzimidazole (PBI)) that extends around the periphery of the image region of the disclosed display device. The claim limitation of "plural regions" does not require that the regions be discontinuous or physically separated from one another. Merriam-Webster online dictionary defines a region to be "any of the major subdivisions into which the body or one of its parts is divisible." Since the convex structure 82 of Kojima extends along all four sides of the image region, the Examiner understands these 4 sides to meet the requirement of plural regions based on the definition of a region. Further, although Kojima's convex shape 82 is symmetrical and will increase in height until a maximum is reached and then decrease again, the claims do not require that the surface roughness, after sequentially increasing from a side closer to the outer peripheral edge of the metal back layer *toward* the side away from the outer peripheral edge of the metal back layer, cannot then decrease again. Finally, Applicant suggests that the height of the convex shape 82 was cited in relation to the resistance of the convex shape 82; it is unclear to the Examiner how the height of the convex shape 82 was cited in relation to anything other than the roughness since the claimed resistance requirements ("high-resistance section" in claim 1; "surface resistivity of 1×10^9 to 1×10^{15} Ω/square" in claim 3) are inherently disclosed by Kojima since Kojima discloses that convex shape 82 is made of polybenzimidazole (PBI), a high resistance material

with a surface resistivity within the required range; in fact the surface resistivity requirements claimed are dimensionless.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne M. Hines whose telephone number is (571) 272-2285. The examiner can normally be reached on Monday through Friday from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anne M Hines
Patent Examiner
Art Unit 2879

MARICELI SANTIAGO
PRIMARY EXAMINER